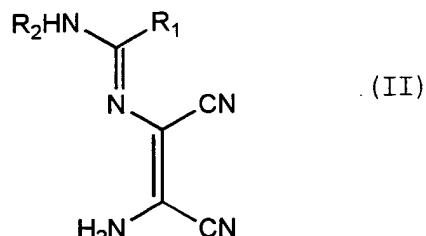


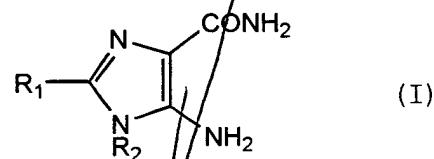
*Seb A*

WHAT IS CLAIMED IS:

1. A process for the preparation characterized in that a compound represented by formula (II):

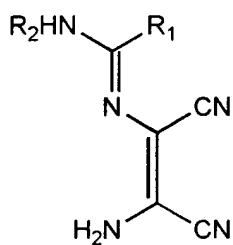


(wherein  $R_1$  and  $R_2$  each independently represent a hydrogen atom, an alkyl group of C1 to C10 which may have substituents, a hydrocarbon group of C3 to C14 having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group) and/or a salt thereof are cyclized and hydrolyzed in an aqueous basic solution in a process for preparing a compound represented by formula (I):



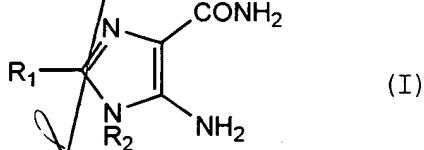
(wherein  $R_1$  and  $R_2$  are the same as defined above).

2. A process for the preparation characterized in that a compound represented by formula (II):



(II)

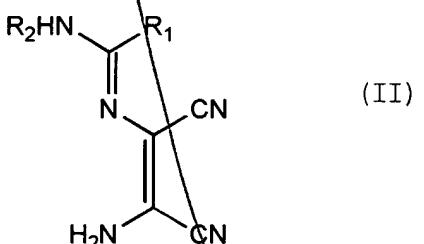
(wherein  $\text{R}_1$  represents a hydrogen atom, an alkyl group of C1 to C10 which may have substituents, a hydrocarbon group of C3 to C14 having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group; and  $\text{R}_2$  represents a hydrogen atom and/or a salt thereof are cyclized/ hydrolyzed in an aqueous basic solution followed by adjusting the pH to the isoelectric point to precipitate crystal in a process for preparing a compound represented by formula (I):



(I)

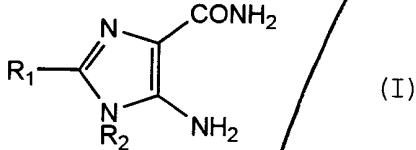
(wherein  $\text{R}_1$  and  $\text{R}_2$  represent the same as defined above).

3. A process for the preparation characterized in that a compound represented by formula (II):



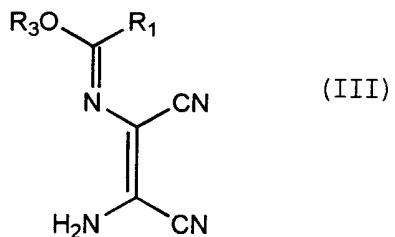
(II)

(wherein R<sub>1</sub> represents a hydrogen atom, an alkyl group of C1 to C10 which may have substituents, a hydrocarbon group of C3 to C14 having alicyclic skeletons, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group; and R<sub>2</sub> represents a hydrogen atom) and/or a salt thereof are cyclized/ hydrolyzed in an aqueous basic solution followed by adjusting the pH to 9 to 13 to precipitate crystal in a process for preparing a compound represented by formula (I):

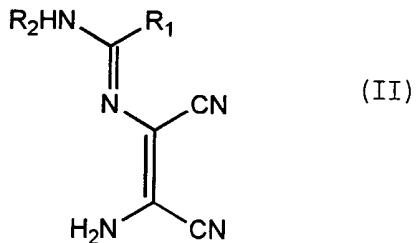


(wherein R<sub>1</sub> and R<sub>2</sub> represent the same as defined above).

4. The process for the preparation according to Claim 3 characterized in that the pH is adjusted to a range of 11 to 12.
5. The process for the preparation according to any of Claim 1 through Claim 4 characterized in that the basic compound is sodium hydroxide or potassium hydroxide.
6. A process for the preparation characterized in that a compound represented by formula (III):

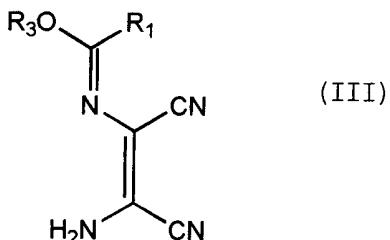


(wherein  $R_1$  represents the same as defined above and  $R_3$  represents an alkyl group of C1 to C6) is reacted with ammonia in C1 to C5 alcohol in a process for preparing a compound represented by formula (II):



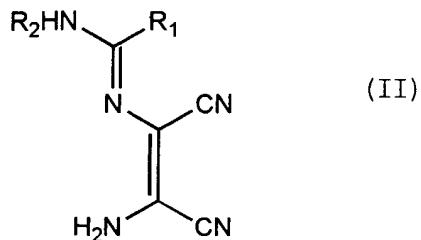
(wherein  $R_1$  represents the same as defined above and  $R_2$  represents a hydrogen atom).

7. A process for the preparation characterized in that diaminomaleonitrile is reacted with a compound represented by formula (IV):  $R_1C(OR_3)_3$  (wherein  $R_1$  and  $R_3$  represent the same as defined above) in C1 to C5 alcohol to produce a compound represented by formula (III):



(wherein  $R_1$  and  $R_3$  represent the same as defined above), which is further reacted with ammonia in C1 to C5 alcohol in a process

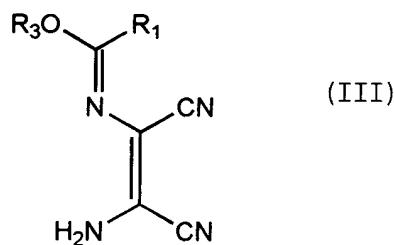
for preparing a compound represented by formula (II) :



(wherein  $R_1$  represents the same as defined above and  $R_2$  represents a hydrogen atom).

8. The process for the preparation according to Claim 6 or Claim 7 characterized in that C1 to C5 alcohol is methyl alcohol or ethyl alcohol.

9. A process for the preparation characterized in that diaminomaleonitrile is reacted with a compound represented by formula (IV):  $R_1C(OR_3)_3$  (wherein  $R_1$  and  $R_3$  represent the same as defined above), in C1 to C5 alcohol in a process for preparing a compound represented by formula (III) :



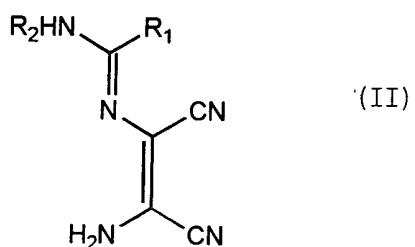
(wherein  $R_1$  and  $R_3$  represent the same as defined above).

10. The process for the preparation according to Claim 9 characterized in that C1 to C5 alcohol is methyl alcohol or ethyl alcohol.

11. A process for the preparation characterized in that a compound of the formula (V):  $R_1CN$  (wherein  $R_1$  represents an

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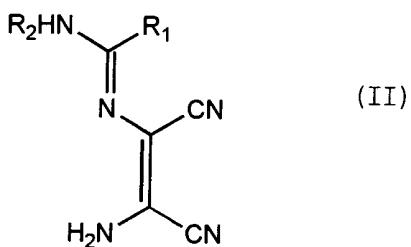
alkyl group of C1 to C10 which may have substituents, a hydrocarbon group of C3 to C14 having alicyclic skeletons, an alkenyl group which may have substituents, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group), is reacted with diaminomaleonitrile in the presence of an acid in a process for preparing a compound represented by formula (II) :



(wherein R<sub>1</sub> represents the same as defined above and R<sub>2</sub> represents a hydrogen atom) and salts thereof.

12. The process for the preparation according to Claim 11 characterized in that the acid is anhydrous hydrochloric acid.

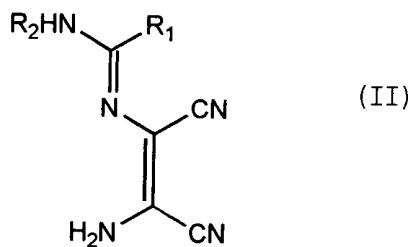
13. A compound represented by general formula (II) :



(wherein R<sub>1</sub> represents the same as defined above and R<sub>2</sub> represents a hydrogen atom) and salts thereof.

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14. A process for the preparation characterized in that diaminomaleonitrile and a compound represented by formula (VI):  $R_1CONHR_2$  (wherein  $R_1$  and  $R_2$  each independently represent a hydrogen atom, an alkyl group of C1 to C10 which may have substituents, a hydrocarbon group of C3 to C14 having alicyclic skeletons, an alkenyl group which may have substituents, an alkynyl group which may have substituents, an aryl group which may have substituents, an aralkyl group which may have substituents, a heterocyclic group which may have substituents, a heterocyclic alkyl group which may have substituents, an N-unsubstituted or substituted carbamoyl group, or an alkoxy carbonyl group), are reacted with a compound selected from the group consisting of phosphorous oxychloride, phosphorous trichloride, phosphorous pentachloride, phosphorous oxybromide, diphosphoryl chloride, sulfonyl chloride, sulfonyl chloride, phosgene, diphenogene, triphenogene, and chloroformate trichloromethyl ester in a process for preparing a compound represented by general formula (II):



(wherein  $R_1$  and  $R_2$  represent the same as defined above).

15. The process for the preparation according to any of Claims 1 through 3, 6, 7, 9, 11 or 14 wherein  $R_1$  in formulae (I) through (VI) is

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a hydrogen atom,

an unsubstituted alkyl group of C1 to C10 having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyl, oxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups,

a hydrocarbon group of C3 to C14 having alicyclic skeletons,

an unsubstituted alkenyl group of C1 to C10 having straight or branched chains,

an alkenyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

an unsubstituted alkynyl group of C1 to C10 having straight or branched chains,

an alkynyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

a phenyl group,

a phenyl group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted aralkyl group having straight or branched chains,

an aralkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic group,  
a heterocyclic group substituted with halogen atoms, alkyl,  
alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl,  
heterocyclic alkyl groups,  
an unsubstituted heterocyclic alkyl group having straight or  
branched chains,  
a heterocyclic alkyl group having straight or branched chains  
substituted with halogen atoms, alkyl, alkoxy, phenyl,  
substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl  
groups,  
an N-unsubstituted or substituted carbamoyl group,  
or an alkoxycarbonyl group

16. The process for the preparation according to any of Claim 1  
or Claim 14 wherein R<sub>2</sub> in formulae (I), (II) and (VI) is  
an unsubstituted alkyl group of C1 to C10 having straight or  
branched chains,  
an alkyl group having straight or branched chains substituted  
with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyloxy,  
hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino  
groups,  
a hydrocarbon group of C3 to C14 having alicyclic skeletons,  
an unsubstituted alkenyl group of C1 to C10 having straight or  
branched chains,  
an alkenyl group of C1 to C10 having straight or branched chains  
substituted with halogen atoms, hydroxyl, alkoxy, phenyl,  
substituted phenyl groups,  
an unsubstituted alkynyl group of C1 to C10 having straight or

2025 PCT/GB2007/000207

branched chains,

an alkynyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

a phenyl group

a phenyl group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted aralkyl group having straight or branched chains,

an aralkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic group,

a heterocyclic group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic alkyl group having straight or branched chains,

a heterocyclic alkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an N-unsubstituted or substituted carbamoyl group,  
or an alkoxy carbonyl group.

17. The process for preparation according to any of Claims 1 through 3, 6, 7, 9, 11, or 14 wherein R<sub>1</sub> in formulae (I) through

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(VI) is

a hydrogen atom,

an unsubstituted alkyl group of C1 to C10 having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyloxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups.

18. The process for the preparation according to any of Claims 1 through 3, 6, 7, 9, 11 or 14 wherein R<sub>1</sub> in general formulae (I) through (VI) is an unsubstituted alkyl group of C1 to C10 having straight or branched chains.

19. The compound according to Claim 13 wherein R<sub>1</sub> in formula (II) is

an unsubstituted alkyl group of C1 to C10 having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyloxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups,

a hydrocarbon group of C3 to C14 having alicyclic skeletons,

an unsubstituted alkenyl group of C1 to C10 having straight or branched chains,

an alkenyl group of C1 to C10 having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

an unsubstituted alkynyl group of C1 to C10 having straight or

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branched chains,

an alkynyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, phenyl, substituted phenyl groups,

a phenyl group,

a phenyl group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted aralkyl group having straight or branched chains,

an aralkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic group,

a heterocyclic group substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an unsubstituted heterocyclic alkyl group having straight or branched chains,

a heterocyclic alkyl group having straight or branched chains substituted with halogen atoms, alkyl, alkoxy, phenyl, substituted phenyl, heterocyclic, aralkyl, heterocyclic alkyl groups,

an N-unsubstituted or substituted carbamoyl group,  
or an alkoxycarbonyl group.

20. The compound according to Claim 13 wherein R<sub>1</sub> in formula (II) is

an unsubstituted alkyl group of C1 to C10 having straight or branched chains,

an alkyl group having straight or branched chains substituted with halogen atoms, hydroxyl, alkoxy, acyloxy, carbamoyloxy, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkoxycarbonyl, amino groups.

21. The compound according to Claim 13 wherein  $\underline{R_1}$  in formula (II) is an unsubstituted alkyl group of C1 to C10 having straight or branched chains.